

FlyCAM UART SYNTAX 1.1

FIGs

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Template for Commands

Command	Upper Byte		Lower Byte	
NULL	0000	00000	0000	0000
GET	0001	CCCC	CCCC	CCCC
SET	0010	CCCC	CCCC	CCCC
SEND	0011	CCCC	CCCC	CCCC
ERROR	0100	EEEE	EEEE	EEEE
EMERGENCY	1111	XXXX	XXXX	XXXX
DATA	DDDD	DDDD	DDDD	DDDD

Properties:

- 0 - 4095 commands
- 0 - 4095 Error codes

NULL will be sent when no data needs to be sent but data is expected.

DATA being broadcast from the micro-controller to the computer should be processed by a send command.

GET, SEND and SET should share the same 3 lower nibbles if they access the same data.

Key:

- C = Command Number bit
- X = Don't Care bit
- E = Error Bit

Command List:

Command	Upper Byte		Lower Byte	
NULL	0000	00000	0000	0000
GET Velocity	0001	0000	0000	0000
GET Acceleration	0001	0000	0000	0001
GET Jerk	0001	0000	0000	0010
GET X Lower Displacement	0001	0000	0000	0011
GET Y Lower Displacement	0001	0000	0000	0100
GET X Upper Displacement	0001	0000	0000	0101
GET Y Upper Displacement	0001	0000	0000	0110
SET Velocity	0010	0000	0000	0000
SET Acceleration	0010	0000	0000	0001
SET Jerk	0010	0000	0000	0010
SET X Lower Displacement	0010	0000	0000	0011
SET Y Lower Displacement	0010	0000	0000	0100
SET X Upper Displacement	0010	0000	0000	0101
SET Y Upper Displacement	0010	0000	0000	0110
SET Enable Broadcasts	0010	0000	1000	0000
SET Disable Broadcasts	0010	0000	1000	0001
SEND Velocity	0011	0000	0000	0000
SEND Acceleration	0011	0000	0000	0001
SEND Jerk	0011	0000	0000	0010
SEND X Lower Displacement	0011	0000	0000	0011
SEND Y Lower Displacement	0011	0000	0000	0100
SEND X Upper Displacement	0011	0000	0000	0101
SEND Y Upper Displacement	0011	0000	0000	0110
ERROR: Unable to Send	0100	0000	0000	0000
ERROR: Unable to Receive	0100	0000	0000	0001
ERROR: Unable to Disable Broadcasts	0100	0000	0000	0010
ERROR: Unable to Enable Broadcasts	0100	0000	0000	0011
ERROR: FIFO Full	0100	0000	0000	0100
EMERGENCY	1111	1111	1111	1111

Note:

The UART broadcasts data at regular rate if data is needed immediately GET commands can be issued to get the data immediately.